

WHAT IS CLAIMED IS:

1. An electric energy-conversion machine comprising:
a rotor having a longitudinal axis ; and
a stator for providing a magnetic field which passes through said rotor, all
of the stator which provides said magnetic field encircles said rotor above
and below said longitudinal axis.
2. The electric energy-conversion machine of claim 1 wherein the stator
includes only a permanent magnet.
3. The electric energy-conversion machine of claim 1 wherein the stator
includes a electromagnet.
4. The electric energy conversion machine of claim 1 wherein said rotor
includes a commutator.
5. The machine of claim 1 wherein said machine is a motor.
6. The machine of claim 5 wherein said motor is a d.c. motor.
7. The machine of claim 5 wherein said motor is an a.c. motor.
8. The machine of claim 5 wherein said machine is an alternator.
9. The machine of claim 5 wherein said machine is a generator.
10. An electric energy-conversion machine comprising:
a rotor having a longitudinal axis; and
a stator having at least two magnetic field generating elements, wherein at
least one of the magnetic field generating elements is a pair of permanent
magnets and one of the magnetic field generating elements encircles said
rotor above and below said longitudinal axis
11. The electric energy-conversion machine of claim 10 wherein the magnetic
field generating elements that encircle the rotor are permanent magnets.

12. The electric energy-conversion machine of claim 10 wherein the magnetic field generating elements which encircle the rotor is a winding.
13. The electric energy-conversion machine of claim 10 wherein said rotor includes a commutator.